

4. (Original) A semiconductor device according to claim 1 wherein the refractory material is selected from the group consisting of Al, Mg, Ti, Zr, Y, Ca, Mo, Ce, Hf, Ta, B, V and a combination of these.
5. (Original) A semiconductor device according to claim 4 wherein the refractory material is characterized by having low thermal conductivity and high electrical permittivity.
6. (Original) A semiconductor device according to claim 4, wherein the refractory material is polycrystalline zirconia.
7. (Original) A semiconductor device according to claim 4 wherein the refractory material is an oxide.
8. (Original) A semiconductor device according to claim 4 wherein said refractory material is a carbide, nitride or boride.
9. (Original) A semiconductor device according to claim 4 wherein said refractory material contains silicon.
10. (Original) A semiconductor device according to claim 4 wherein said refractory material is porous.
11. (Original) A refractory material layer according to claims 4 to 10 wherein said material is deposited by sol-gel technique or anodic oxidation.
12. (Original) A refractory material layer according to claims 4 to 10 wherein said refractory material is deposited by chemical or physical vapor deposition processes.
13. (Original) A refractory material layer according to claims 4 to 10 wherein said refractory material is deposited by electron, ion, atom or laser beam processes.

14. (Original) A refractory material wherein said refractory material has at least one crystal parameter close to that of crystalline silicon
15. (Withdrawn) A semiconductor device according to claim 1 in which silicon is deposited by either chemical vapor deposition methods or physical vapor deposition methods.
16. (Withdrawn) A semiconductor device according to claim 1 to 15 in which silicon is crystallized by laser annealing techniques
17. (Withdrawn) Process according to claim 16 wherein silicon is annealed using an excimer laser
18. (Withdrawn) Process according to claim 16 wherein silicon is crystallized by either microwave annealing, furnace annealing or lamp annealing.
19. (Original) A semiconductor device according to claim 1 wherein said device is a PIN diode suitable for applications selected from the group consisting of imaging sensors and photovoltaic devices.